

REMARKS

Claims 1 through 11 and new Claim 12 are pending in the application. Claim 11 has been amended to highlight the methods of the invention, incorporating xylooligosaccharide and at least one intense sweetener. Support for Claim 11 can be found in the application as filed. Claim 12 has been added to complete the record for examination and highlight advantageous embodiments of the invention. Claim 12 is directed to beneficial aspects of the invention in which the xylooligosaccharide is a compound of formula (I) and the beverage comprises 0.1 to 2.0 % by weight, based on the beverage, of xylooligosaccharide. Support for Claim 12 can be found in the application as filed, for example on Page 5, lines 4 through 8 and lines 18 through 19.

Reexamination and reconsideration of this application, withdrawal of all rejections, and formal notification of the allowability of the pending claims are earnestly solicited in light of the remarks which follow.

*Claim Objections*

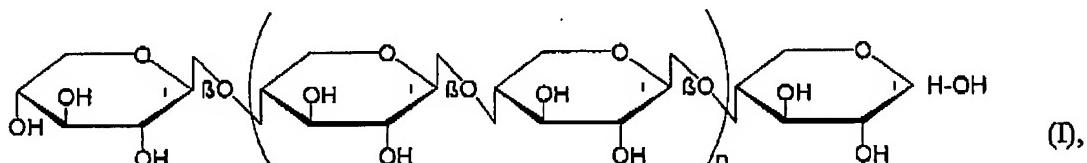
Claims 4 and 8 have been amended to delete the informalities kindly noted by the Examiner, thereby obviating these objections.

*The Claimed Invention is Patentable in Light of the Art of Record*

Claim 11 stands rejected under 35 USC 102(b) as being anticipated by JP 10337164 A; JP 09248153 A and JP 08056607A (collectively referred to as "Shimizu").

Claims 1 through 10 stand rejected under 35 USC 103(a) as unpatentable over Shimizu in view of DE 19653354 C1 to Jager et al ("Jager")

It may be useful to consider the invention as recited in the claims before addressing the merits of the rejection. The claims recite beverages comprising at least one xylooligosaccharide and at least one intense sweetener. In advantageous embodiments, the xylooligosaccharide is a compound of the formula I



$n = DP = 0-3$   
DP = degree of polymerization

as recited in Claim 2. In further beneficial aspects of the invention, the xylooligosaccharide has a degree of polymerization of DP = 1 to 10, as recited in Claim 3. In advantageous embodiments, the beverage comprises 0.01 to 5% by weight, based on the beverage, of xylooligosaccharide, as recited in Claim 4. In further beneficial aspects of the invention, the beverage comprises 0.1 to 2.0 % by weight, based on the beverage, of xylooligosaccharide, as recited in Claim 12.

The overall impression of alcohol-free beverages is formed by the combination of the beverage's aroma, sweetness impression, acidity impression and color. The quality, particularly the flavor, of a beverage is critically influenced by the interaction of its constituents, with each constituent potentially influencing several aspects of the overall impression. Sugar, known to impart sweetness to foods, also causes a full-bodied flavor impression, for example. Sugar thus allows many flavorings to appear balanced, that is, have a taste harmony of aroma, sweetness and acidity.

Intense sweeteners are commonly used as sugar substitutes. Intense sweeteners are known not to achieve the taste profile of sugar when used alone, however. Attempts have been made to achieve the full-bodied character and/or mouth feel of beverages containing intense sweeteners

by including particular additives. However, considerable amounts of these particular additives have heretofore been required to achieve the desired full bodied character, such as amounts of up to 10% by weight. The use of these additives in such elevated quantities is cost prohibitive and may further detrimentally affect digestive processes.

Applicants have determined xylooligosaccharides which can, even at relatively small doses, significantly improve the full-bodied character of beverages containing intense sweeteners, and can thus significantly enhance the overall flavor impression. Applicants have determined that the recited xylooligosaccharides are effective at concentrations ranging from about 0.01 to 5% by weight, as recited in Claim 4, for example. Applicants have further determined that the claimed xylooligosaccharides are effective even in more limited concentrations, such as from 0.1 to 2.0 % by weight, as recited in Claim 12.

In contrast to the claimed invention, reciting a mixture of different types of sweetener to impart a balanced, more full-bodied flavor, Shimizu incorporates a mixture of xylooligosaccharides alone to produce beverages having a lesser flavor, i.e. lower sweetness. Shimizu's mixtures incorporate a minimum of three different xylooligosaccharides, including xylose. Shimizu's English Abstract is further silent as to the amounts in which the xylooligosaccharide mixture is used.

Applicants respectfully submit that Shimizu does not teach or suggest the claimed invention, considered either alone or in combination with the art of record. Shimizu does not teach or suggest beverages comprising at least one xylooligosaccharide and at least one intense sweetener. In fact, Shimizu teaches away from the recited intense sweeteners by seeking to reduce the sweetness of the resulting beverages. Shimizu further teaches away from the beneficial aspects of the invention recited in Claim 2 by expressly requiring the incorporation of a smaller xylooligosaccharide, i.e. xylose. Shimizu also does not teach or suggest the advantageous embodiments reflected in Claim 4, reciting 0.01 to 5 % by weight of xylooligosaccharide, and

most certainly does not teach or suggest the advantageous embodiments reflected in Claim 12, reciting 0.1 to 2.0 % by weight of xylooligosaccharide.

Jager is directed to the use of oligosaccharides, such as inuline and oligo-fructose, to increase the sweetening power of an acesulfame K/aspartame mixture. As noted in the Application as filed (Page 3, lines 21 through Page 4, line 1), such known oligosaccharides must be added in considerable amounts, e.g. up to 10% by weight, to achieve the desired level of activity.

Applicants respectfully submit that Jager, considered either alone or in combination with the art of record, does not teach or suggest the claimed invention, reciting beverages comprising at least one xylooligosaccharide. Jager thus certainly does not teach or suggest the xylooligosaccharides of Claim 2. Jager further does not teach or suggest the beneficial xylooligosaccharide amounts recited in Claims 4 and 12. In fact, Jager teaches away from such amounts by incorporating significantly greater amounts of oligosaccharides into his compositions.

There would have been no motivation to have combined these references. Applicants respectfully note that merely because the references can be combined is not enough, there must still be a suggestion. MPEP 2143.01 (section citing Mills). Shimizu, seeking to lower the sweetness of his compositions, would simply not have been motivated to incorporate Jager's acesulfam-K/aspartame mixture.

However, even if combined (which Applicants submit should not be done), the present invention would not result. Shimizu (again, seeking lower sweetness) employs a particular mixture of xylooligoaccarides, including xylose, as an individual sweetener. Jager is directed to the use of oligosaccharides, such as inuline and oligo-fructose. As noted above, such oliosaccharides must be employed in elevated amounts to provide suitable results.

Consequently, neither Shimizu or Jager, alone or in combination, teach or suggest the recited beverages comprising at least one xylooligosaccharide and at least one intense sweetener. Nor does the combination teach or suggest the beneficial embodiments reflected in Claim 2. The combination certainly does not teach or suggest the advantageous embodiments reflected in Claim 4, reciting 0.01 to 5 % by weight of xylooligosaccharide or the advantageous embodiments reflected in Claim 12, reciting 0.1 to 2.0 % by weight of xylooligosaccharide.

Accordingly, Applicants respectfully submit that Claims 1 through 12 are patentable in light of the art of record, considered either alone or in combination.

**CONCLUSION**

It is respectfully submitted that Applicants have made a significant and important contribution to the art, which is neither disclosed nor suggested in the art. It is believed that all of pending Claims 1 through 12 are now in condition for immediate allowance. It is requested that the Examiner telephone the undersigned if any questions remain to expedite examination of this application.

It is not believed that fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional fees are necessary to allow consideration of this paper, the fees are hereby authorized to be charged to Deposit Account No. 50-2193.

Respectfully submitted,

*K. Schweitzer*

Klaus Schweitzer  
See attached Limited Recognition  
Under 37 CFR § 10.9(b)

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ProPat, L.L.C.  
2912 Crosby Road  
Charlotte, NC 28211  
Telephone: 704-365-4881  
Facsimile: 704-365-4851

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*Claire Wygand*  
Ms. Claire Wygand